

## REMARKS

Claims 16, 19-40, 44 and 45 are pending in the application; claims 31-40 are withdrawn; new claims 46 and 47 directed to group III are added.

### Claim Rejections - 35 U.S.C. 112

Claims 16, 19-30, 44 and 45 stand rejected under 35 U.S.C. 112, 2nd paragraph, as being indefinite. The examiner again objects to "collagen, collagen derivatives" and "composites of collagen and collagen derivatives".

Examiner's position is that it is art-recognized that composites are coexistent with derivatives, and disregards the provided evidential material and further states that applicant's own statement seems to verify examiner's position.

First of all the claims 20, 21, 25-30 do not contain language in regard to "collagen, collagen derivatives" and "composites of collagen and collagen derivatives". Therefore, the rejection made by examiner concerns only claims 16, 19, 22, 23, 24, 44, 45.

Applicant has clearly stated that a derivative is a chemically modified compound, i.e., a chemical compound (defined by its chemical formula) modified by chemical reaction. For example, an ester is a derivative of an acid produced by reacting the acid with an alcohol. One chemical compound is reacted or transformed to another distinct chemical compound. The reaction product is a derivative and is a distinct chemical compound having a specific chemical formula. The term derivative has a distinct meaning in chemistry as set forth in Wikipedia (see copy provided 10/1/2008). Other meanings of derivative can be taken from the attached copy of Wikipedia "Derivative (disambiguation)": "derivative" is also used in calculus, finance, and law; in regard to chemistry the only meaning is that evidenced by the copy submitted with the amendment dated 10/1/2008 - a "composite" is therefore not a derivative.

A composite is an **engineered material** that is produced by using two materials and combining them to a product in which both materials are still present. Examples are fiber-reinforced polymers or glass-reinforced plastics. A composite requires two or more distinct materials that are combined to form a structural component with the two or more materials still present; it is not a single compound that is modified by chemical reaction to another compound still having the same "root" structure (like reacting methacrylic acid with

methanol to form the ester compound methyl methacrylate) and is therefore not a derivative pursuant to the definition provided in Wikipedia.

Applicant has provided evidence that to a person skilled in the art "derivative" and "composite" are entirely different things. Applicant therefore respectfully requests that examiner provide proof that "it is art-recognized that composites are coexistent with derivatives".

Moreover, examiner's attention is respectfully directed to MPEP 2173.05(h) where it is stated (4th paragraph under the heading "I Markush Groups"):

"Similarly, the double inclusion of an element by members of a Markush group is not, in itself, sufficient basis for objection to or rejection of claims. Rather, the facts in each case must be evaluated to determine whether or not the multiple inclusion of one or more elements in a claim renders that claim indefinite. The mere fact that a compound may be embraced by more than one member of a Markush group recited in the claim does not necessarily render the scope of the claim unclear. For example, the Markush group, "selected from the group consisting of amino, halogen, nitro, chloro and alkyl" should be acceptable even though "halogen" is generic to "chloro."

Reconsideration and withdrawal of the rejection of the claims under 35 USC 112 are respectfully requested.

#### **Rejection under 35 U.S.C. 103**

Claims 16, 19-24, 30, 44, and 45 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Langer et al.* (US 6,224,893).

*Langer et al.* (US 6,224,893) discloses compositions for tissue engineering and drug delivery where two or more polymers are used to form interpenetrating networks in that the polymers crosslink with themselves but not with the other polymer(s). The polymers are comprised of compounds such as collagen, hyaluronic acid etc. Cells may be attached or drugs may be incorporated. The base material is resorbable. The examiner states that the electrostatically flocculated fibers of the instant claims represent a process limitation that has no weight in the claimed composition so that *Langer et al.* make obvious the invention as claimed.

Claim 16 has been amended to set forth a biocompatible scaffold comprised of at

least one base material in the form of a three-dimensional body and fibers connected to at least one side of the three-dimensional body, wherein the fibers are connected to the at least one side by electrostatic flocking. The claim thus sets forth two components of the scaffold: a three-dimensional body and fibers connected to the at least one side of the three-dimensional body. The prior art does not set forth fibers that are connected to a three-dimensional body of base material. The cited reference sets forth two or more interpenetrating polymer networks but the polymers are only crosslinked with themselves and do not attach or connect or crosslink to the other polymer(s). Each polymer thus remains separate from the other(s) and there are no fibers connected to the interpenetrating networks or the individual network. The attached cells cannot make obvious fibers; neither can drugs that are incorporated into the networks make obvious fibers.

Claim 20 has been amended to define a biocompatible scaffold comprised of at least one base material in the form of a three-dimensional body, an adhesive covering at least one side of the three-dimensional body, and fibers connected by the adhesive to the at least one side and applied by electrostatic flocking. The claim thus sets forth three components of the scaffold: a three-dimensional body, an adhesive covering at least one side of the three-dimensional body, and fibers connected by the adhesive to the at least one side of the three-dimensional body. The prior art does not set forth fibers that are connected to a three-dimensional body of base material by an adhesive that covers the three-dimensional body on at least one side.

The claims 16 and 20 are therefore not obvious in view of the cited reference and should be allowable together with their dependent claims, respectively.

Reconsideration and withdrawal of the rejection of the claims are therefore respectfully requested.

Rejoinder of the withdrawn claims is respectfully requested.

#### **ALLOWABLE SUBJECT MATTER**

No rejection over prior art has been made in regard to claims 25-29; these claims are therefore believed to be allowable.

### **CONCLUSION**

In view of the foregoing, it is submitted that this application is now in condition for allowance and such allowance is respectfully solicited.

Should the Examiner have any further objections or suggestions, the undersigned would appreciate a phone call or e-mail from the examiner to discuss appropriate amendments to place the application into condition for allowance.

Authorization is herewith given to charge any fees or any shortages in any fees required during prosecution of this application and not paid by other means to Patent and Trademark Office deposit account 50-1199.

Respectfully submitted on April 6, 2009,

/Gudrun E. Hockett/

---

Ms. Gudrun E. Hockett, Ph.D.  
Patent Agent, Registration No. 35,747  
Schubertstr. 15a  
42289 Wuppertal, GERMANY  
Telephone: +49-202-257-0371  
US-Fax: (877) 470-9712  
gudrun.draudt@t-online.de

GEH

Encl: Wikipedia - Derivative (disambiguation)

# Derivative (disambiguation)

From Wikipedia, the free encyclopedia

**Derivative**, in calculus, is a measurement of how a function changes when the values of its inputs change.

**Derivative** may also refer to:

- Derivative (finance), a contract whose value is derived from that of other quantities
- Derivative (chemistry), a type of compound which is a product of the process of derivatization
- Derivative Inc., a spin-off of Side Effects Software, creators of Houdini (software)
- Derivative suit or derivative action, a type of lawsuit filed by minority shareholders
- Derivative work, in copyright law, a modification of an original work
- Formal derivative, in mathematics, an operation on elements of a polynomial ring which mimics the form of the derivative from calculus
- Aeroderivative, a mechanical drive gas turbine derived from an aero engine gas turbine

## See also

- Derivation
- Derived, in phylogenetics, a trait present in an organism, but absent in the last common ancestor of its group

Retrieved from "[http://en.wikipedia.org/wiki/Derivative\\_\(disambiguation\)](http://en.wikipedia.org/wiki/Derivative_(disambiguation))"

Category: Disambiguation pages

Hidden categories: [All disambiguation pages](#) | [All article disambiguation pages](#)

---

- This page was last modified on 9 January 2009, at 16:16.
- All text is available under the terms of the GNU Free Documentation License. (See **Copyrights** for details.)  
Wikipedia® is a registered trademark of the Wikimedia Foundation, Inc., a U.S. registered 501 (c)(3) tax-deductible nonprofit charity.